

ABSTRACT

ATS MINIATURE BASED MICROCONTROLLER ATmega 8

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The main purpose of this final project is to design and to make a useful technology for the development of science and technology, particularly the need for renewable sources of electrical energy. This technology serves to optimize a system of continuity of electricity supply, in this case is the system power savings with solar power to replace electricity from PLN. which is applied to savings and processing of renewable energy.

The method used in transferring energy to electricity from PLN source of renewable power sources by identifying potential opportunities utilization of electrical energy that can be processed from the sun to its full potential as needed, the design is used as a media processor of solar energy in the form of solar cell and inverter with some of the key benefits of which have high enough power to process the energy of sunlight to forms of electrical energy, does not cause burning or residue remaining highly destructive nature.

Based on the results of testing of the tool auto transfer switch (ATS) has demonstrated results in accordance with the plan. This tool can remove the source of electrical energy from the source of PLN to sell solar inverter (the source of the inverter as the preferred source) to supply the load, the delay time can be determined. Automatic transfer system that is less influenced by the voltage of 209 volts. LCD can display information and the time delay setting voltage value and voltage inverter solar sell PLN, and also displays the cursor as a sign of the voltage source of voltage source inverter or PLN to supply the load.

Key words: *electrical energy, renewable energy, Auto Transfer Switch*